

**DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION**

A21EU Revision 16 British Aerospace (Operations) Limited HP.137 Jetstream Mk.1 Jetstream Series 200 Jetstream Series 3101 October 6, 2003

TYPE CERTIFICATE DATA SHEET No. A21EU

This data sheet, which is a part of Type Certificate No. A21EU prescribes conditions and limitations under which the product for which the type certificate was issued, meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder. British Aerospace (Operations) Limited Trading as
 British Aerospace Regional Aircraft
 Prestwick International Airport
 Ayrshire KA9 2RW
 Scotland

I. Model HP.137 Jetstream Mk.1 (Normal Category), approved April 25, 1969. (See NOTE 7).
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Engine. 2 Turbomeca Astazou XIVC or XIVC1 (Propeller Turbine) or 2 Turbomeca Astazou XVIF1 (Propeller Turbine) (ADA MOD. 040/137) (See NOTE 5).

<u>Fuel.</u>	<u>American</u>	<u>British</u>	<u>French</u>	<u>NATO</u>
	ASTM Jet A or A1	or D.Eng.RD 2453 or 2494	or AIR 3405	or F34 or F35
	*ASTM Jet B or JP-4 (MIL-T-5624)	*or D.Eng.RD 2454 or 2486	or AIR 3407	*or F40 or F45
	JP-5 (MIL-T-5624)	or D.Eng.RD.2498	or AIR 3404	or F42 or F44

* Not usable for airplanes with MOD.NO.5168
 (Specifications as revised)

<u>Oil</u> (Engine & Gearbox)	<u>American</u>	<u>British</u>	<u>French</u>	<u>NATO</u>
	MIL-L-7808	-	or AIR 3513	or
	-	D.Eng.RD 2487	3514	or 0-148 or 0-150
	-	D.Eng.RD 2490	or AIR 3517	or 0-149 or 0-159
	MIL-L-23699	-	or AIR 3515	or 0-135
		Specifications as revised)	-	or 0-156

Engine Limits. Static Ratings
 The static ratings for the Astazou engines are specified under the following test conditions.

International Standard Atmospheric Conditions at Sea Level.

Calibrated slave air intake duct (TURBOMECA 6 103 43 905 0)
 Short and straight slave exhaust diffuser, outlet diameter 8.98 in. (228 mm)

All optional air bleeds closed.
 Aircraft Service accessory drive unloaded.
 43089 engine RPM.

Page No.	1	2	3	4	5	6	7	8	9	10	11	9	10	11
Rev. No.	15	8	9	13	13	12	15	11	13	13	12	16	16	16

Astazou XIVC and XIVCI

	Shaft Horse Power	Jet Thrust (lb)	Torquemeter Reading (%)	Indicated RPM (%)	Specific Fuel Consumption (lb/shp/hr)	Jet Pipe Temp.(EGT) °C
<u>Conditions</u>						
Takeoff	776	123.5	98.5	98.7	0.562	500
Max. Cont.	699	121.0	88.5	98.7	0.582	480

Astazou XIVC and XIVCI

	Shaft Horse Power	Jet Thrust (lb)	Torquemeter Reading (%)	Indicated RPM (%)	Specific Fule Consumption (lb/shp/hr)	Jet Pipe Temp.(EGT) °C
<u>Conditions</u>						
Takeoff	839	137.5	103.6	98.7	0.558	585
Max. Cont.	786	136.5	97.0	98.7	0.569	540

Engine Limits.

All new and overhauled engines must meet the above acceptance limits. See ARB Approved Flight Manual, DOC. HP.4.3 for additional engine operating Limitations. (See NOTE 5).

Propeller and Propeller Limits.

2 Hamilton Standard reversible propellers Type 23LF-335, 23LF-373, or 23LF-371 for ADA MOD 040/137 only.

Blades : 3 Type 1017
Diameter : 8 ft. 6 in. (No reduction permitted)
Pitch settings at 42 in. station:
Ground - 5.5
Flight Fine + 7 ± ½
Feathered + 80
Full Reverse - 14 (with Modification 1331 embodied -10)

Airspeed Limits.

	(Maximum Operating Speed)	<u>W/O MOD.NO.5168</u>	<u>With MOD.NO.5168 embodied</u>
V _{MO} up to 18000 ft.		215 knots	up to 19000 ft 220 knots
at 20000 ft.		205 knots	
at 25000 ft.		180 knots	at 25000 ft 190 knots
V _A (Maneuvering Speed)		170 knots	174 knots
V _{FE} (Flaps Extended Speed)			
Takeoff		156 knots	162 knots
Landing 50° Down		120 knots	120 knots
V _{LE} (Landing Gear Extended Speed)		156 knots	162 knots
V _{LO} (Landing Gear Operating Speed)		156 knots	162 knots
V _{MC} (Minimum Control Speed)		88 knots	88 knots

C.G. Limits.

(Landing Gear Extended)

(+ 213.5 in.) to (+ 228 in.) at 11,000 lb, or less
(+ 215.0 in.) to (+ 228 in.) at 12,500 lb.
(+ 215.0 in.) to (+ 228.0 in.) at 13,230 lbs.

Straight line variation between points given.
Moment change (Landing Gear Retraction) -4550 lb. in. (moves C of G forward)

Datum.

Fuselage station "0" (140 inches fwd of marked "cowling type" screw on fuselage bottom).

Leveling Means.

Leveling Marks provided on fuselage seat rails.
At station 225.5 left and right
At station 252.5 right only.

<u>Maximum Weight.</u>		<u>W/O MOD. NO. 5168</u>	<u>WITH MOD.NO.5168</u>
	Takeoff	12,500 lb.	13,230 lbs.
	Zero Fuel	12,500 lb.	12,500 lbs.
<u>Minimum Crew.</u>	1 pilot		1 pilot
<u>Maximum Passengers.</u>	18		19
<u>Maximum Baggage.</u>	550 lb. (+ 391.3 in.)		
<u>Fuel Capacity.</u>	461 U.S. Gals. in 2 tanks (+ 226.2 in.) 459 U.S. Gals. usable. (See NOTE 1 for data on system fuel).		
<u>Oil Capacity.</u>	2.1 U.S. Gals./tank on each engine (+ 167 in.) 1.3 U.S. Gals./tank usable. (See NOTE 1 for data on system oil).		
<u>Max. Operating Altitude.</u>	25,000 ft.		
<u>Control Surface Movements.</u>	Elevator	28° Up	22° Down
	Elevator Trim Tab	5° Up	13° Down
	Rudder	25° Right	25° Left) Measure relative
	Rudder Trim Tab	20° Right	20° Left) to aircraft datum
	Aileron	25° Up	15° Down
	Aileron Trim Tab	8.5° Up	8.5° Left side only
	Flaps Landing	50° Down	
	Takeoff	20° Down	
	Lift Dump	70° Down	

II. Jetstream Series 200 (Normal Category), approved May 17, 1977.

Engine. 2 Turbomeca Astazou XVICI or XVIF (Propeller turbine).

These engines are not interchangeable.

<u>Fuel.</u>	<u>American</u>	<u>British</u>	<u>French</u>	<u>NATO</u>
	ASTM Jet A or A1	or D.Eng.RD 2453 or 2494	or AIR 3405	or F34 or F35
	ASTM Jet B or JP-4 (MIL-T-5624)	or D.Eng.RD 2454 or 2486	or AIR 3407	*or F40 or F45
	JP-5 (MIL-T-5624)	or D.Eng.RD.2498	or AIR 3404	or F42 or F44

(Specifications as revised)

<u>Oil</u> (Engine & Gearbox)	<u>American</u>	<u>British</u>	<u>French</u>	<u>NATO</u>
	MIL-L-7808	-	or AIR 3513 or 3514	or 0-148 or 0-150
	-	D.Eng.RD 2487	or AIR 3517	or 0-149 or 0-159
	-	D.Eng.RD 2490	or AIR 3515	or 0-135
	MIL-L-23699	-	-	or 0-136

(Specifications as revised)

Engine Limits.Static Ratings

The static ratings for the Astazou engines are specified under the following test conditions.

International Standard Atmospheric Conditions at Sea Level.

Calibrated slave air intake duct (TURBOMECA 6 103 43 905 0)

Short and straight slave exhaust diffuser, outlet diameter 8.98 in. (228mm)

All optional air bleeds closed.

Aircraft service accessory drives unloaded.

43089 engine RPM.

Engine Limits.

(Continued)

Astazou XVIC1C and XVIF

<u>Conditions</u>	Shaft Horse Power	Jet Thrust (lb)	Torquemeter Reading (%)	Indicated RPM (%)	Specific Fuel Consumption (lb/shp/hr)	Jet Pipe Temp.(EGT) °C
Takeoff	912	141.6	97.3	98.7	0.558	585
Max. Cont.	785	139.4	83.7	98.7	0.579	540

All new and overhauled engines must meet the above acceptance limits.

See CAA Approved Flight Manual, Doc. HP.4.8 for additional engine Operating Limitations.

Propeller and Propeller Limits.

2 Hamilton Standard Type 23LF-371 reversible propellers.

(Clarification)

Blades : 3 Type 1017

Diameter : 8 ft. 6 in. (No reduction permitted)

Pitch settings at 42 in. station:

Ground - 5.5°

Flight Fine + 7° ± 0.5°

Feathered + 80°

Full Reverse - 14°

Airspeed Limits.

(Maximum Operating Speed)

V_{MO} up to 18,000 ft. 215 knots

at 25,000 ft. 180 knots

V_A (Maneuvering Speed) 170 knots

V_{FE} (Flaps Extended Speed)

Takeoff 156 knots

Landing 50° Down 120 knots

V_{LE} (Landing Gear Extended Speed) 156 knots

V_{LO} (Landing Gear Operating Speed) 156 knots

V_{MC} (Minimum Control Speed) 89.5 knots

C.G. Limits.

(Landing Gear Extended)

(+ 213.5 in.) to (+ 228 in.) at 11,000 lb, or less

(+ 215.0 in.) to (+ 228 in.) at 12,500 lb.

Straight line variation between points given.

Moment change (Landing Gear Retraction) -4550 lb. in. (moves C of G forward)

Datum.

Fuselage station "0" (140 inches fwd of marked "cowling type" screw on fuselage bottom).

<u>Leveling Means.</u>	Leveling Marks provided on fuselage seat rails. At station 225.5 left and right At station 252.5 right only.		
<u>Maximum Weight.</u>	Takeoff	12,500 lb.	
	Zero Fuel	12,250 lb.	
<u>Minimum Crew.</u>	1 pilot		
<u>Maximum Passengers.</u>	18		
<u>Maximum Baggage.</u>	550 lb. (+ 391.3 in.)		
<u>Fuel Capacity.</u>	461 U.S. Gals. in 2 tanks (+ 226.2 in.) 459 U.S. Gals. usable. (See NOTE 1 for data on system fuel).		
<u>Oil Capacity.</u>	2.1 U.S. Gals./tank on each engine (+ 167 in.) 1.3 U.S. Gals./tank usable. (See NOTE 1 for data on system oil).		
<u>Max. Operating Altitude.</u>	25,000 ft.		
<u>Control Surface Movements.</u>	Elevator	28° Up	22° Down
	Elevator Trim Tab	5° Up	12° Down
	Rudder	25° Right	25° Left (Measure relative)
	Rudder Trim Tab	25° Right	25° Left (to aircraft datum)
	Aileron	24° Up	15° Down
	Aileron Trim Tab	8.5° Up	8.5° Down (Both sides)
	Flaps Landing	50° Down	
	Takeoff	20° Down	
	Lift Dump	70° Down	

III. Jetstream Model 3101 (Normal Category), approved November 30, 1982.

The Jetstream Model 3101 is same as Jetstream Series 200 except for:

- 1) turbopropeller engines;
- 2) propeller;
- 3) powerplant control and indications;
- 4) electrical generation and distribution;
- 5) air conditioning;
- 6) passenger cabin;
- 7) increased overall structural strength;
- 8) increased design weights and speeds;
- 9) certification basis

<u>Engine.</u>	2 Airesearch TPE 331-10UF-501H turbopropeller or TPE 331-10UF-511H (BAe Mod 7300) or TPE 331-10UF-512H (BAe Mod 7356) or TPE 331-10UF-513H (BAe Mod 7357) or TPE 331-10UR-513H (BAe Mod 7379) or TPE 331-10UG-513H (BAe Mod 7432) (See Note 9) or TPE 331-10UGR-513H (BAe Mod 7434) (See Note 9) or TPE 331-10UGR-514H (BAe Mod 7547) (See Note 9) or TPE 331-10UG-514H (BAe Mod 7548) (See Note 9) Both engines must have same model number (See Note 10)		
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<u>Fuel.</u>	<u>American</u>	<u>British</u>	<u>NATO</u>
	ASTM Jet A	-	-
	ASTM Jet A1	or D.Eng.RD 2494	or F35
	MIL-T-83133,JP8*	or D.Eng.RD 2453*	or F34*
	Fuel marked thus * contain fuel system icing inhibitor (FSII) and no further additions shall be made.		

(Specifications as revised)

<u>Oil</u> (Engine and Gearbox)	MIL-L-23699B (Specifications as revised)
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<u>Engine Limits.</u>	<u>Static Ratings</u>
	The static ratings for the Airesearch engines are based on the conditions specified on TCDS E4WE.

<u>Engine Limits.</u>	Shaft Horse Power (SHP)	Prop Shaft Speed (RPM)	Exhaust Gas Temp. (EGT) Single Red Line (°C)
<u>Conditions</u>			
Takeoff	940*	1591	650
Maximum Cont.	900	1591	650
Starting	-	-	770

* For airplane incorporating BAe MOD 7340, otherwise 900 SHP.

All new and overhauled engines must meet the above acceptable limits.
See CAA Approved Flight Manual, Doc. HP.4.10 for additional engine Operating Limitations.

<u>Propeller and Propeller Limits.</u>	2 Dowty Rotol (c) R.333/4-82-F/12
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Blades : 4
Diameter : 106 inches (No reduction permitted)
Pitch angles at Section J-J setting line:

Start Locks	- 1° 45'	+ 0° 30'
Flight Idle	+ 9°	+ 0° 30'
Feathered	+ 82° 20'	± 0° 20'
Reverse	- 13°	+ 0° 30'

<u>Airspeed Limits.</u>	V _{MO} (Maximum Operating Speed)	<u>Without MOD 7380</u>	<u>With MOD 7380</u>
	up to 16,750 ft.	230 knots	
	up to 18,300 ft.		223 knots
	at 25,000 ft.	194 knots	194 knots
V _A (Maneuvering Speed)		180 knots	176 knots
V _{FE} (Flaps Extended Speed)			
	Takeoff 10° Down	177 knots	172 knots
	Approach 20° Down	168 knots	164 knots
	Landing (pre Mod 7760) 50° Down	130 knots	130 knots
	Landing (post Mod 7760) 35° Down	149 knots	153 knots
	Lift Dump 70° Down	100 knots	100 knots
V _{LE} (Landing Gear Extended Speed)		168 knots	164 knots
V _{LO} (Landing Gear Operating Speed)		168 knots	164 knots
V _{MC} (Minimum Control Speed)			
	Takeoff (Flaps 10°)	92 knots	92 knots
	Approach (Flaps 20°)	90 knots	90 knots
For airplane with Mod 7340:			
	Approach (Flaps 20°)	94 knots	94 knots

<u>C.G. Limits.</u> (Landing Gear Extended)	(+ 213.5 in.) to (+ 226 in.) at 11,000 lb. or less (+ 217.2 in.) to (+ 226 in.) at 14,550 lb. for airplanes without BAe MOD 7380 (+ 217.8 in.) to (+ 226 in.) at 15,212 lb. for airplanes with BAe MOD 7380 Aft C.G. limit is 227.5 in. at all weights for airplanes with BAe MOD 7362. Straight line variation between points given. Moment change (Landing Gear Retraction) -4450 lb. in. (moves C of G forward)			
<u>Datum.</u>	Fuselage station "0" (140 inches fwd of marked "cowling type" screw on the bottom surface of fuselage).			
<u>Leveling Means.</u>	Leveling marks provided on fuselage seat rails. At station 225.5 left and right At station 252.5 right only.			
<u>Maximum Weight.</u>		<u>Without MOD 7380</u>	<u>With MOD 7380</u>	
	Ramp	14,660 lb. (6650 Kg)	15,322 lb. (6950 kg)	
	Takeoff	14,550 lb. (6600 Kg)	15,212 lb. (6900 kg)	
	Zero Fuel	13,228 lb. (6000 Kg)	13,668 lb. (6200 kg) (Pre-Mod 7456)	
	Zero Fuel	-	13,889 lb. (6300 kg) (Pre-Mod 7456)	
	Zero Fuel	-	14,300 lb. (6486 kg) (Post-Mod 7846)	
	Landing	14,550 lb. (6600 Kg)	14,550 lb. (6600 kg) (Pre-Mod 7713)	
	Landing	-	14,900 lb. (6759 kg) (Pre-Mod 7713)	
<u>Minimum Crew.</u>	2 pilots			
<u>Maximum Crew.</u>	2 (See NOTE 4)			
<u>Maximum Passengers.</u>	19 (See NOTE 4)			
<u>Maximum Baggage.</u>	661 lb. (+ 380.0 in.)			
<u>Fuel Capacity.</u>	461 U.S. Gals. in 2 tanks (+ 226.2 in.) 451 U.S. Gals. usable. (See NOTE 1 for data on system fuel).			
<u>Oil Capacity.</u>	1.56 U.S. Gals./tank in each engine compartment (+ 179.8 in.) 1.50 U.S. Gals./tank usable. (See NOTE 1 for data on system oil).			
<u>Max. Operating Altitude.</u>	25,000 ft.			
<u>Control Surface Movements.</u>	Elevator	28° Up	22° Down	
	Elevator Trim Tab	5° Up	7.5° Down (For airplane without BAe MOD 7362)	
			8.5° Down (For airplane with BAe MOD 7362)	
	Rudder	25° Right	25° Left	
	Rudder Trim Tab	25° Right	25° Left	
	Aileron	25° Up	15° Down	
	Aileron Trim Tab	8.5° Up	8.5° Down	
	Flaps	Takeoff	10° Down	
		Approach	20° Down	
		Landing	50° Down (Pre Mod 7760)	
		Landing	35° Down (Post Mod 7760)	
		Lift Dump	70° Down	

DATA PERTINENT TO ALL MODELS

<u>Serial Nos. Eligible.</u>	The United Kingdom Certificate of Airworthiness for Export endorsed as noted under "Import Requirements" must be submitted for each individual aircraft for which application for certification is made.
<u>Import Requirements.</u>	A United States Airworthiness Certificate may be issued on the basis of a United Kingdom Certificate of Airworthiness for Export signed by a representative of the United Kingdom Civil Aviation Authority containing the following statement: "The airplane covered by this certificate has been examined, tested and found to conform to the type design approved under FAA Type Certificate A21EU and is in a condition for safe operation." (See NOTE 6).
<u>Certification Basis.</u>	<p><u>For Models HP.137 Jetstream Mk 1 and Jetstream Series 200 (See NOTE 7).</u></p> <p>FAR 21.29 and FAR 23, effective February 1, 1965, including Amendments 23-1 through 23-3, plus Special Conditions notified by the U.S. Government to the Government of the United Kingdom in FAA letter of October 30, 1967.</p> <p>Compliance has been demonstrated with the requirements of 14 CFR Section 25.1419: Ice Protection.</p> <p>Date of Application for original Type Certificate: February 15, 1966. Request for extension granted in accordance with FAR 21.17(b)(2).</p> <p>Date of application for amended Type Certificate Jetstream Series 200: November 22, 1973.</p> <p>Compliance has been demonstrated with the Special Federal Aviation requirements SFAR-41C effective September 13, 1982 (See NOTE 7).</p> <p>Date of application for amended Type Certificate Model HP.137 Jetstream MK1 Mod 5168-SFAR-41C: May 11, 1981.</p> <p><u>For Jetstream Model 3101:</u> FAR 21.29 and FAR 23, effective February 1, 1965 including Amendments 23-1 through 23-3. Special Conditions notified by the U.S. Government to the Government of the United Kingdom in FAA letter of October 30, 1967. Special Federal Aviation Regulation No. 41, effective October 17, 1979 including Amendments 41-A and 41-C. Federal Aviation Administration Exemption No. 3548, issued on June 10, 1982. Special Federal Aviation Regulation No. 27, effective February 1, 1974, including Amendments 27-1 through 27-4 (Fuel Venting). - The Airesearch TPE 331 approved engines comply with the fuel venting emission requirements of SFAR 27 with the installation of Garrett Fuel Manifold Purge System Kit No. 3101458-1.</p> <p>FAR 36, effective December 1, 1969, including Amendments 36-1 through 36-12.</p> <p>Compliance was demonstrated to the following FAR 25 requirements in effect of 8 May 1970, in lieu of the FAR 23 ground load and landing gear requirements.</p> <p>FAR Sections 25.471, 25.473, 25.477, 25.479, 25.481, 25.483, 25.485, 25.487, 25.489, 25.491, 25.493, 25.495, 25.499, 25.503, 25.507, 25.509, 25.511, 25.573, 25.723, 25.725, 25.727, 25.729 (in effect on 7 May 1970), 25.731, 25.733 and 25.735.</p> <p>Compliance has been demonstrated with the requirements of 14 CFR Section 25.1419: Ice Protection.</p>

Compliance has been demonstrated with the requirements of FAR Sections 23.253, 23.335(b)(4), 23.1505(c) and 23.1545(d), as amended by Amendment 23-7.

Compliance has been demonstrated with the requirements of Special Federal Aviation Regulations SFAR-41c when supplements are incorporated into the Flight Manual Document No. HP.4.10 (See NOTE 6).

Compliance has been demonstrated with FAA Special Conditions Reference 23/ACE/9 effective 1 February 1985, when BAe MOD Kit 3299, Automatic Performance Reserve (with BAe MOD. No. 7376), or BAe MOD KIT 3359/1:

Automatic Performance Reserve (with BAe MODS No. 7376 and 7472) have been embodied and when Supplement No. 4 is incorporated into Flight Manual Doc. No. HP.4.10.

Date of Application for amended Type Certificate Jetstream Model 3101:
February 21, 1980.

Type Certificate No. A21EU issued April 25, 1969 for the HP.137 Jetstream Mk 1, amended May 17, 1977 for the Jetstream Series 200, and amended November 30, 1982 for the Jetstream Model 3101, and amended April 19, 1985 for Mod. No. 5168.

Certification basis for the water-methanol systems BAe MOD KIT 3147/2 and BAe MOD KIT 3358 is as follows (See NOTE 8).

23.901(a) and (d); 23.903 (a)(1) and (c); 23.1041; 23.1141(a); 23.1143(a),(b),(c),(d), and (e); 23.1182; 23.1183(a); 23.1189(a)(1),(a)(4),(a)(5),(a)(6), and (c); 23.1301; 23.1309 (a) and (b) effective March 26, 1984, and 25.945 effective May 2, 1977.

FAR Part 135 Appendix A Sections 4(e) and (g); 5; 6(b) and (c); 18, 19(b); 20(a)(b), (d)(e), and (f); 35(a), (c), (d) and (h); 38(a)(1) and (a)(3); 46; 59; 60; 63(b) and 64. SFAR 41C section 5(h).

Service Information.

Service Information. The Type Certificate for HP.137 Jetstream Mk.1, Jetstream Series 200 and Jetstream Model 3101 (Series 3100) is held by BAE SYSTEMS (Operations) Ltd. of Prestwick International Airport. Flight Manuals, Overhaul and Maintenance Manuals, Pilot's or Crew or Manufacturer's Operating Manuals, Structural Repair Manuals, Service Bulletins, Vendor Manuals, including amendments thereto, and related documents, issued in respect of HP.137 Jetstream Mk.1 and/or Jetstream Series 200 and/or Jetstream Model 3101 (Series 3100) by either Handley Page Aircraft Limited, or Scottish Aviation Limited, or British Aerospace - Aircraft Group - Scottish Division, or British Aerospace PLC - Aircraft Group - Scottish Division, or British Aerospace PLC - Aircraft Group - Civil Division - Prestwick, or British Aerospace PLC - Civil Division - Prestwick, or British Aerospace PLC - Civil Aircraft Division - Prestwick, or British Aerospace (Commercial Aircraft) Limited - Airlines Division - Prestwick, or British Aerospace Regional Aircraft Limited - Prestwick, or Jetstream Aircraft Limited or BAE SYSTEMS (Operations) Ltd., which contain a statement that the document is ARB or CAA approved, or ARB or CAA approved through the Manufacturer's ARB or CAA Approval Ref. AD/1039/39 or DAI/8208/71 or AD/1051/44 or DAI/1743/44 or DAI/1011/55 or DAI/9386/92 or JAA JAR 21 Approval Ref. CAA.JA02034, are accepted by the FAA and are considered FAA approved. These approvals pertain to the type design only.

Equipment.

The basic required equipment as prescribed in the applicable airworthiness regulations (See Certification Basis) must be installed in the aircraft for certification. Approved equipment is included in HP MD/AIR/137.101/JRF/PC for HP.137 Jetstream Mk 1, SAL MRI No. JS 200 for Jetstream Series 200, and BAe 1379303A/1379304A for Jetstream Model 3101. In addition the following items of equipment are required.

- a) Stall Warning Indicators (Safe Flight Ltd. Type No. C77106-3 or C77106-4 or C77106-5).

- b) Stick Pusher Unit (Dowty Jack 1.03650.004).
- c) ARB-Approved Airplane Flight Manual, Doc. No. HP.4.3 for HP.137 Jetstream Mk 1.
CAA-Approved Airplane Flight Manual, Doc. No. HP.4.8 for Jetstream Series 200.
CAA-Approved Airplane Flight Manual, Doc. No. HP.4.10 (CAA-approved on November 19, 1982) for Jetstream Model 3101.
The CAA (formerly ARB)-Approved Airplane Flight Manuals are also FAA-approved.

NOTE.

- NOTE 1. Current weight and balance report, including list of equipment included in the certified empty weight and loading instructions when necessary, must be in each aircraft at the time of original certification and at all times thereafter (except in the case of operators having an approved weight and control system).

The certificated empty weight and corresponding center of gravity locations must include:

For Models HP.137 Jetstream Mk 1 and Jetstream Series 200.

Unusable fuel of 12 lb. at (+215.5 in.)

Unusable oil of 18 lb. at (+167.0 in.)

For Model Jetstream Series 3101

Unusable fuel of 66 lb. at (+215.5 in.)

Unusable oil of 7 lb. at (+200.0 in.)

- NOTE 2. The following placards must be displayed in full view of the pilot:
- a) This airplane must be operated as a normal category airplane in compliance with the operating limitations stated in the form of placards, markings and manuals. No aerobatic maneuvers, including spins, approve.”
- Footnote
All placards required in the approved Airplane Flight Manual must be installed in the appropriate locations.
- b) Each individual airplane will be supplied with a placard that specified the kinds of operation, such as VFR or IFR, Day or Night to which the operation of the airplane is limited by the equipment installed.

- NOTE 3. The service life limits for aircraft structural parts which are fatigue critical are listed in the approved Airplane Flight Manual, Doc. No. HP.4.3 for HP.137 Jetstream Mk, Doc.No.HP.4.8 for Jetstream Series 200, and Section 2.5 (dated 10 November 1982) of British Aerospace PLC Doc. No. SA.4-3100/MS/3 for the Jetstream Model 3101.

- NOTE 4. When a Jetstream Model 3101 airplane leaves the British Aerospace - Prestwick factory in the green configuration defined by Modification 76051 (or equivalent Modification), the flight crew is limited to two pilots. No persons other than the flight crew may be carried. The CAA-Approved Airplane Flight Manual Doc. No. HP.4.10 must incorporate Amendment No. P/4.

When a Jetstream Model 3101 airplane leaves the British Aerospace - Prestwick factory in the fully furnished configuration defined by Mod 73101 (or equivalent Modification) no limitations apply.

- NOTE 5. The Astazou XVIF1 engine, (installed to modification ADA D40/137) will deliver more power under certain temperature and altitude conditions than the Astazou XIVC or C1 engine. However, the maximum power available from either installation is the same below 2000 ft. The approved Flight Manual, Doc. HP.4.3 takes account of this.

- NOTE 6. For Jetstream Model 3101, the United States Airworthiness Certificate shall be endorsed “This airplane at weights in excess of 5,700 kg does not meet the airworthiness requirements of ICAO as prescribed by Annex 8 of the Convention on International Civil Aviation.”

For airplane without BAe MOD 7380:

No endorsement is required when supplement No. 5 is incorporated into Flight Manual Supplement No. HP.4.10. Embodiment of the Flight Manual Supplement No. 5 must be recorded by entering BAe modification No. Kit 3278 in the relevant aircraft documents.

No physical changes are required for embodiment of BAe modification No. Kit 3278.

For airplane with BAe Mod 7380:

No endorsement is required when Supplement No. 7 is incorporated into Flight Manual Document No. HP.4.10.

Airplanes incorporating an Automatic Power Reserve (APR) System (See Certification Basis) require the additional incorporation of Supplement No. 9 into Flight Manual Document No. HP.4.10.

Airplanes fitted with a Water Methanol System (See NOTE 8) require the additional incorporation of Supplement No. 8 into Flight Manual Document No. HP.4.10.

Embodiment of only Flight Manual Supplement No. 7 must be recorded by entering BAe Modification No. Kit 3378A in the relevant aircraft documents.

Embodiment of Flight Manual Supplements Nos 7 and 8 must be recorded by entering BAe Modification No. Kit 3378C in the relevant aircraft documents. No physical changes are required for embodiment of BAe Modifications Nos Kit 3378A, 3378B or 3378C.

For aircraft already in service, after entering BAe Modification No. Kit 3278, Kit 3378A, Kit 3378B, or Kit 3378C in the relevant aircraft documents request the removal of the endorsement of non-compliance with ICAO Annex 8 Regulations from the aircraft's airworthiness certificate, from the local FAA General Aviation District Office.

NOTE 7.

Compliance with requirements of:

FAR 36, effective December 1, 1969, including Amendments 36-1 through 36-12, and SFAR 41 C effective September 13, 1982, has been demonstrated for the HP.137 Jetstream MK1 airplane incorporating British Aerospace Modification No. 5168.

The airworthiness certificate of the HP.137 Jetstream Mk1 airplanes incorporating BAe M No. 5168 must be endorsed: "This airplane at weights in excess of 5700 kg does not meet the airworthiness requirements of ICAO, as prescribed by Annex B of the Convention on International Civil Aviation", And; The CAA approved Flight Manual Doc. No. HP.4.3 must include CAA approved particular amendments Nos. P/4, P/6, P/7, P/8, P/9, P/10, P/11 and CAA approved supplements No. 15 (also see Equipment).

NOTE 8.

Installation of water-methanol system BAe MOD KIT 3147/2 requires the installation of FAA-approved engines model TPE-331-10UF-513H and the embodiment of BAe MOD 7376.

Installation of water-methanol system BAe MOD KIT 3358 requires the installation of FAA-approved engines model TPE 331-10UG-513H or TPE 331-10UG-514H and the embodiment of BAe MODS 7376 and 7472.

Installation of either BAe MOD KIT 3147/2 or BAe MOD KIT 3358 requires incorporation of Supplement No. 6 in AFM document No. HP.4.10.

NOTE 9.

When engines TPE 331-10UG-513H (BAe MOD 7432), TPE 331-10UGR-513H (BAe MOD 7434), TPE 331-10UGR-514H (BAe MOD 7547), or TPE 331-10UG-515H (BAe MOD 7548) are installed, associated BAe MOD 7341 - indicating System for Strain Gauge Torque Sensing System, must be embodied. The CAA approved Flight Manual Doc. No. HP.4.10 must incorporate Amendment No. P/26.

NOTE 10.

TPE 331-10UG-513 H and TPE 331-10UG-514H engines may be interchanged. TPE 331-10UGR-513H and TPE 331-10UGR-514H engines may be interchanged.

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